SONY

4-121-493-**11** (1)

Memory Stick Duo™ Reader/Writer

Operating Instructions

Before operating the unit, please read this document thoroughly, and retain it for future reference.

MEMORY STICK ™

MRW66E-H1

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http://www.sony.net/

WARNING

Keep the unit away from children. If any part of the unit is swallowed, promptly see a doctor.

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Caution

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note

If you have any questions about this product, you may call the telephone number listed in "Technical Support." The telephone number below is not for customer service but only for official purposes.

Declaration of Conformity

Trade Name:	SONY
Model No.:	MRW66E
Responsible Party:	Sony Electronics Inc.
Address:	16530 Via Esprillo, San Diego, CA 92127 U.S.A.
Telephone No.:	858-942-2230

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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Overview

The MRW66E-H1 (hereafter referred to as the "reader/writer") has the following features:

☐ Quick and simple data transfer - easily transfer images from camera to PC
☐ Quick to Connect - Hot-pluggable USB-powered design
☐ 8-bit parallel data transfer can be supported when "Memory Stick PRO-HG Duo" is used.

System Requirements

The reader/writer requires the following minimum system configuration:

- OS
  - Windows Vista®
  - Windows® XP (Service Pack 2 or later)
  - Windows® 2000 Professional (Service Pack 4 or later)
  - Mac OS® X 10.2 or later

  This product works with the standard Windows drivers.

Supported Media

The reader/writer supports the following media:

"Memory Stick" media

- "Memory Stick Duo" (without MagicGate)
- "MagicGate Memory Stick Duo"
- "Memory Stick Duo" (with MagicGate) *1
- "Memory Stick PRO Duo" *1
- "Memory Stick PRO-HG Duo" *2
- "Memory Stick Micro" ("M2") *1*3*4

*1 4-bit parallel data transfer is supported. It, however, varies depending on each medium and how long it takes to read/write data.
*2 8-bit parallel data transfer is supported. It, however, varies depending on medium and how long it takes to read/write data.
*3 "M2" is an abbreviation of "Memory Stick Micro". In this document, hereinafter, the abbreviation "M2" is used.
*4 With adaptor only (not supplied).

Notes

- In this manual, all types of media listed in "Supported Media" are generically called memory cards.
- Not all memory cards are guaranteed to work. Operation is not assured if non-supported memory cards are used.
- "MagicGate®" is the general name of a copyright protection technology developed by Sony.
- Recording or playback of the data that uses "MagicGate" technology is not supported. MagicGate is copyright protection that uses encryption technology. Data recording/playback by using MagicGate technology such as music that requires copyright protection is only compatible with MagicGate supported equipment.
- The capacity of a file to be recorded/played back is smaller than 4GB per file according to the specifications of the system incorporated in "Memory Stick".
- Although operation check of this product has been performed with up to 8 GB "Memory Stick," please note that the operation is not guaranteed for every type of "Memory Stick."
- The "Memory Stick" media all use the same slot, so you cannot use them at the same time.
- Only DOS format is supported. Memory cards in other formats are not supported.

About Memory Stick

What is "Memory Stick"?

"Memory Stick" is a compact-size IC recording medium with a large storage capacity. It has been designed not only for exchanging/sharing digital data among "Memory Stick" compliant products, but also for serving as an insertable/removable external storage medium that can save data.

Notes on "Memory Stick"

On formatting (initialization)

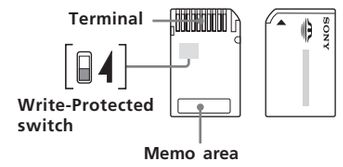
- If you format a medium in which data has been already written, all the data and software will be erased. Please be cautious not to mistakenly erase any important data.
- Please make sure to format (initialize) a medium with the formatter of a "Memory Stick" compliant product. If it is initialized with Windows Explorer, a FORMAT ERROR occurs, and data on the medium can no longer be used by this product.

About the size of "Memory Stick"

- Standard-size "Memory Stick" cannot be used on this product.
- Do not insert multiple "Memory Sticks" at the same time. It might cause damage to the product.
- When you use "Memory Stick Duo" on this product, please make sure to insert it in the right direction.
- "Memory Stick Duo," "Memory Stick Micro," and M2 Duo size Adaptor should be kept away from small children to prevent them from accidentally swallowing it.
- When you use "Memory Stick Micro" on this product, please make sure to attach the medium into M2 Duo size adapter. If you attempt to insert "Memory Stick Micro" without attaching to M2 Duo size adapter, there is a possibility that it cannot be pulled out.

Usage Notes

Notes on using "Memory Stick Duo/Memory Stick PRO Duo"



- When you use "Memory Stick Duo/Memory Stick PRO Duo" without Write-Protected switch, be careful not to edit or erase important data by mistake.
- When you use "Memory Stick Duo/Memory Stick PRO Duo" with Write-Protected switch, data cannot be recorded, edited, or erased by enabling "LOCK" on the switch.
- Use an object with a sharp tip to move the Write-Protected switch.
- Do not press on the memo area strongly when writing.
- Carry and keep "Memory Stick" in the supplied case.

Other Points to Note

Restrictions on DOS mode

In Windows, the reader/ writer does not operate in DOS mode. To use the reader/writer, start up Windows.

Standby

The reader/writer supports standby functions based on the PC2000 standard, which may not cover the standby function of all computers. Disable the standby function of your computer if it causes any problems. While the computer is in standby, do not insert or remove any media.

Do not attempt to dismantle, repair, or alter the reader/writer yourself

Do not, under any circumstances, attempt to dismantle, repair, or alter the reader/writer yourself. You may not only permanently damage the reader/writer and/or your computer, but may also cause fire or personal injury through electrical shock.

Operating and storage environments

- Do not place the reader/writer close to heat sources or in direct sunlight; in dusty, dirty, or humid locations; under precipitation such as rain; or leave it in a vehicle with the windows closed.
- If the reader/writer interferes with the reception of radio or television signals, move the reader/writer away from the radio or television.
- When using the reader/writer, do not wrap it in cloth, sheets, or covers as this may cause a malfunction or fire.

Specifications

USB transfer rate
Full-speed (12 Mbps)
High-speed (480 Mbps)
This high-speed transfer rate is a theoretical value for the USB standard.
Actual performance is dependent on the device.

Power requirements
4.75 to 5.25 V DC

Current consumption
Max. 500 mA

Access indicator
Lit during the memory card insertion.
Blinks on access.

Operating environment
Temperature: 5 °C to 40 °C (41 °F to 104 °F)
Humidity: 30% to 80% RH

Storage environment
Temperature: –30 °C to + 60 °C (–22 °F to +140 °F)
Humidity: No condensation

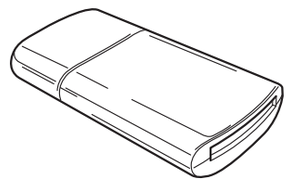
Dimensions (W x H x D)
Approx. 30 × 10.2 × 56.5 mm
($1\ ^3/_{16} \times ^{13}/_{32} \times 2\ ^1/_4$ inches) (excluding protrusions)

Mass
Approx. 15 g (0.53 oz.) (TYP)

Package Contents

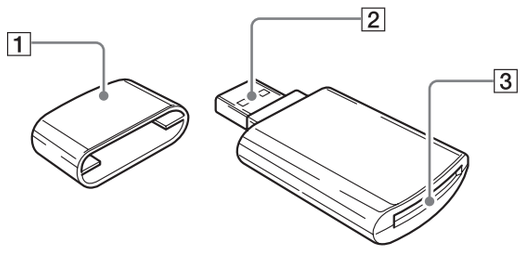
When you unpack the box, make sure that it contains all the accessories listed below.
If anything is missing or damaged, contact your retailer.

- MRW66E-H1 Memory Stick Duo™ Reader/Writer



- Operating Instructions
- Warranty Card

Parts and Functions

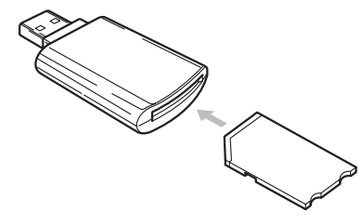


1 **Cap**
2 **USB connector**
Connect to a computer
3 **"Memory Stick" Duo size slot**
Insert "Memory Stick" media here. This is Duo size only. When inserting a "Memory Stick Micro" ("M2"), use an adaptor (not supplied).

Using the Reader/Writer

Inserting a Memory Card

Insert a memory card into the slot on the reader/writer. When inserting a card, push it in as far as it can go.



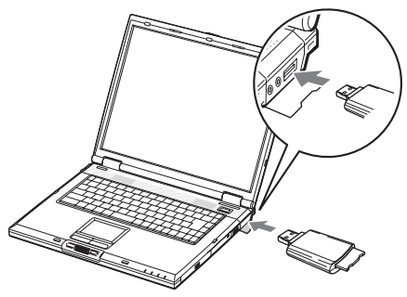
Notes

- Insert only one memory card into the slot. Do not insert multiple cards at the same time.
- When inserting a "Memory Stick Micro" ("M2"), use an appropriate adaptor (not supplied).
- Do not insert a card upside down.
- Forcibly inserting the card may damage the card or the slot.
- If a memory card is inserted incorrectly, you may not be able to remove it. In the unlikely event that a memory card becomes stuck in the reader/writer, consult your local Sony dealer.
- Do not remove a memory card from the reader/writer while the access indicator is blinking. The data stored on the memory card may be damaged.

Connecting the Reader/Writer to a Computer

Simply connect the reader/writer to a computer directly.

1 **Start the computer.**
2 **Pull off the cap of the reader/writer.**
3 **Insert a memory card.**
4 **Connect the USB header of the reader/writer to the USB port on the computer.**



The computer recognizes the reader/writer as a removable disk, and the reader/writer is ready for use.

Notes

- Do not connect to a computer via a USB hub.
- Depending on the computer and the status of its operating system, the reader/writer may not operate or may become unstable. If this occurs, refer to the "Troubleshooting" section.
- After disconnecting from the USB port, wait at least 5 seconds before reconnecting it. (Otherwise, the reader/writer may not be recognized.)
- When two or more USB devices are connected to one computer, the reader/writer is not guaranteed to operate simultaneously with some types of USB devices.
- You may not access two or more memory cards simultaneously on a single computer by connecting additional memory card devices. Remove any memory cards from the reader/writer or turn off the other devices.

Notes for Windows

- On some computers, a message may appear asking you to insert the operating system disc. When this happens, follow the computer's instructions.
- On some computers, the "HI-SPEED USB Device plugged into non-HI-SPEED USB Hub" message may appear, indicating that a hi-speed USB device has been connected to a USB port which does not support hi-speed USB. If your computer has multiple USB ports, try connecting to a different port. Otherwise, close the message and continue using the reader/writer with the current port.

HI-SPEED USB Device Attached To non-HI-SPEED Hub
The USB Mass Storage Device is a HI-SPEED USB device and will function at reduced speed when plugged into a non-HI-SPEED port.
There are no HI-SPEED USB host controllers installed on this computer.
USB Root Hub (2 ports)
USB Mass Storage Device
Unused Port
Recommendation
The USB Mass Storage Device will function at reduced speed. You must add a HI-SPEED USB host controller to this computer to obtain maximum performance.
Close

- **Follow the steps below to turn off the write cache setting for removable disk drives. Leaving this setting on may cause the reader/writer to malfunction.**

– On Windows Vista:
Open the following items in the following order: [Start] button – [Control Panel] – [System and Maintenance] – [Device Manager] button (When clicking on [Device Manager] button, the User Account Control window will appear, click on [Continued]) – [Disk drives] – [Sony Card_R/W -MS USB Device]. On the [Policies] tab in the properties dialog box that appears, make sure that [Optimize for quick removal] is selected.

– On Windows XP:
Open the following items in the following order: [Start] button – [Control Panel] – [Performance and Maintenance] – [System] – [Hardware] tab – [Device Manager] button – [Disk drives] – [Sony Card_R/W -MS USB Device]. On the [Policies] tab in the properties dialog box that appears, make sure that [Optimize for quick removal] is selected.

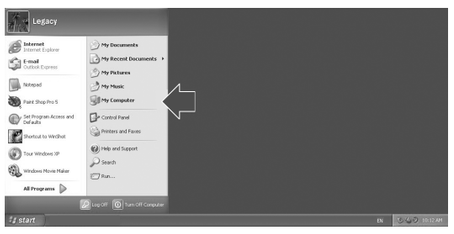
– On Windows 2000:
Open the following items in the following order: [Start] button – [Settings] – [Control Panel] – [System] – [Hardware] tab – [Device Manager] button – [Disk drives] – [Sony Card_R/W -MS USB Device]. On the [Disk Properties] tab in the properties dialog box that appears, make sure the [Write Cache enabled] check box is not selected.

Reading and Writing Data on a Memory Card

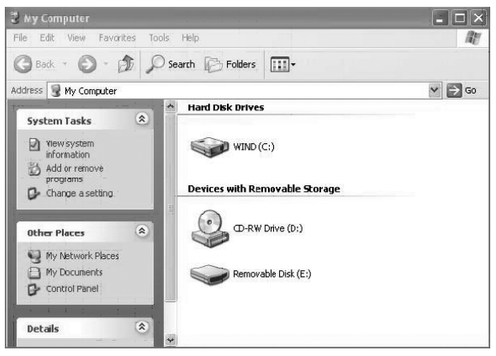
For Windows

The following explanation is illustrated with screens from Windows XP.
The screens may differ for other Windows versions.

1 Open [My Computer].

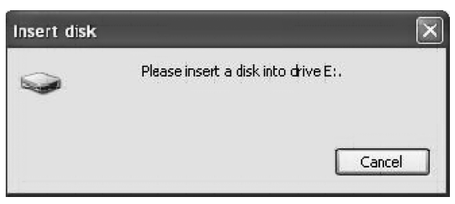


2 Make sure the removable disk icons appear in [My Computer].



Drive letter for the removable disk icon is assigned in alphabetical order to the "Memory Stick" Slot.
For example, if the computer has an A:, C: and D: drive before connecting the reader/writer, the drive letters will be assigned as E: when the reader/writer is connected:

3 Use the removable disk icon to read or write data on the memory card.
If the following message appears, the memory card has not been recognized correctly, remove the card and insert it again.

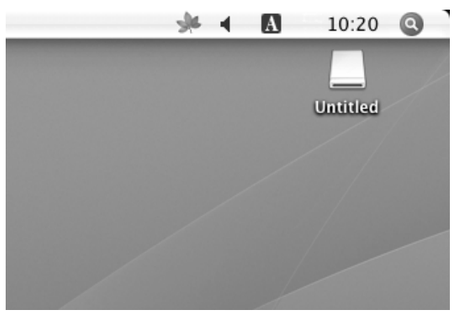


Notes

- It may take a while for the removable disk icon to appear.
- If the removable disk icon does not appear, follow the steps under "Disconnecting the Reader/Writer From the Computer" in the Operating Instructions (this manual) to disconnect the reader/writer, and then wait at least 5 seconds before reconnecting it.
If the [Safely Remove Hardware] icon mentioned in step 1 of "Disconnecting the Reader/Writer From the Computer" is not displayed, skip the rest of the procedure and immediately disconnect the reader/writer.

For Macintosh

1 Connect the reader/writer, with a memory card inserted, to your computer
The removable disk icon appears on the desktop.
When a volume label is assigned to the memory card, the volume label will be displayed together with the removable disk icon.



2 Use the removable disk icon to read or write data on the memory card.

Removing a Memory Card

Notes

- Do not remove a memory card while the access indicator is blinking. Doing so may cause damage to the data stored on the memory card.
- Be sure to follow the steps described below.
Sony accepts no responsibility for any damage or loss that results from removing a memory card without following the procedure described below.

For Windows

1 Make sure the access indicator is not blinking.
2 Open [My Computer].
3 Right-click the removable disk icon, and select [Eject].
4 Pull the memory card straight out.

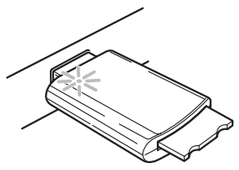
For Macintosh

1 Close the files saved on the memory card, and exit any currently running applications.
2 Make sure the access indicator is not blinking.
3 Drag the removable disk icon to the [Trash].
Alternatively, select the removable disk icon, access the [File] menu on the menu bar, and select [Eject "Untitled"]*.
* Depending on the memory card, a different label than "Untitled" may be shown.
4 Pull the memory card straight out.

Reading the Access Indicator

The access indicator changes according to the status of the reader/writer, as follows:

Reader/writer status	Access indicator
Memory Card inserted	Lights up
Reading/writing data	Blinks*



* Depending on your operating environment and the memory card you are using, the access indicator may blink so quickly it appears to be lit. Be careful not to misread the access indicator.

Note

If data cannot be read from or written to the memory card while the access indicator is lit, make sure the card is fully inserted into the slot.

Disconnecting the Reader/Writer From the Computer

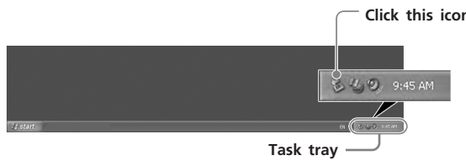
Notes

- Do not disconnect the reader/writer from the computer while the access indicator is blinking. Doing so may cause damage to the data stored on the memory card.
- Be sure to follow the steps described below.
Sony accepts no responsibility for any damage or loss that results from disconnecting the reader/writer without following the procedure described below.

For Windows

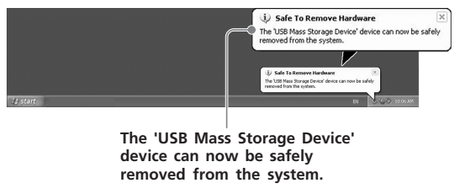
The following explanation is illustrated with screens from Windows XP, and assumes that drive name E: is assigned to the slot of the reader/writer.
The screens may differ for other Windows versions.

1 Click [Safely Remove Hardware] on the task tray, located at the lower right corner of the screen.



2 Click [Safely remove USB Mass Storage Device - Drives (E:)].

3 Make sure the message "The 'USB Mass Storage Device' device can now be safely removed from the system." appears, and then disconnect the reader/writer.



The 'USB Mass Storage Device' device can now be safely removed from the system.

Note

The above steps are not required when removing a memory card from the reader/writer.
When you remove a memory card, follow the steps under "Removing a Memory Card".

For Macintosh

1 Close the files saved on the memory card, and exit any currently running applications.
2 Make sure the access indicator is not blinking.
3 Drag the removable disk icon to the [Trash].
Alternatively, select the removable disk icon, access the [File] menu on the menu bar, and select [Eject "Untitled"]*.
* Depending on the memory card, a different label than "Untitled" may be shown.
If no memory card is inserted into the reader/writer, skip this step.
4 Disconnect the reader/writer from the computer.

Troubleshooting

Before consulting your Sony representative, verify the following. If the problem still persists, consult your local Sony dealer.

Problem	Solution
The computer does not detect the reader/writer.	➡ Your computer and the reader/writer may not be properly connected. Disconnect the reader/writer from the computer and reconnect it.
The removable disk icon does not appear.	➡ Your computer and the reader/writer may not be properly connected. See "Connecting the Reader/Writer to a Computer" and make sure the connection is correct. ➡ A USB device other than the reader/writer is connected to the USB port on the computer.
The memory card cannot be accessed with Windows Explorer or My Computer.	➡ No memory card is inserted. Insert a memory card properly.
The computer does not recognize the memory card	➡ The memory card is not fully inserted. Insert the card completely. ➡ The memory card is not inserted straight. Remove the card and insert it again.
The read/write speed is slow.	➡ The speed may vary depending on the environment or the memory card being used. This is not a malfunction.

Technical Support

Local technical support service is only available in the following sales regions.

☐ **For customers in the USA (Sony Electronics Inc.)**
Monday to Saturday,
8:00 a.m. - 8:00 p.m. CT
- Toll free: 1-800-588-3847
- Free telephone support is offered for 90 days after your first call.
USA technical support only: Web- based technical support is free and available 24 hours a day, 7 days a week.
- Web site:
http://sony.storagesupport.com/

Warranty Card

- A warranty card should be provided with this product at the place of purchase.
- Please read the warranty card, fill in the specified information, and retain it for future reference.
- The warranty period is one year from the date of purchase.

Caution

The warranty and technical support service are valid only in the countries or sales regions specified on the warranty card.